(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau

TAIPO DMPI

) | (1888 | 1888) | 1888 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 | 1889 |

(43) International Publication Date 6 April 2006 (06.04.2006)

(10) International Publication Number WO 2006/035948 A1

- (51) International Patent Classification: *G11B 7/0045* (2006.01) *G11B 19/20* (2006.01)
- (21) International Application Number:

PCT/JP2005/018209

(22) International Filing Date:

26 September 2005 (26.09.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-287825

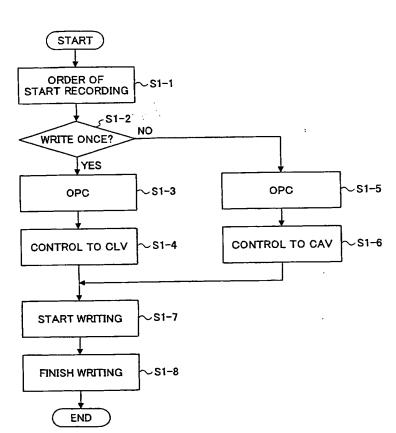
30 September 2004 (30.09.2004) Л

- (71) Applicant (for all designated States except US): RICOH COMPANY, LTD. [JP/JP]; 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): NAGAMURA, Aritsune [JP/JP]; 34-20, Chigusadai, Aoba-ku, Yokohama-shi, Kanagawa, 2270051 (JP).

- (74) Agent: ITOH, Tadahiko; 32nd floor, Yesibu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6032 (JP).
- (81) Designated States (unless otherwise indicated for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: OPTICAL DISK RECORDING METHOD AND OPTICAL DISK RECORDING AND READING APPARATUS



(57) Abstract: An optical disk recording method on the write-once or re-writable optical medium comprising the steps of: identifying the media as write-once or re-writable; performind optimal power calibration procedure in the power calibration area of the disk; and switching to the constant linear velocity control during writing data to the write-once disk; or switching to constant angular velocity control in case of writing to the re-writable medium. The power of the light beam during the writing procedure is set according to the calculations received in the power calibration procedure. In another embodiment, after sensing the write-once medium, if the recording data takes place in the location which is not the most inner radial location of the disk, the method of recording data checks whether the radial distance between the location were recording isgoging to place and the most inner data recording location on the disk is less then a half of the distance between the most distant and most inner radial locations of the disk, and then on a base of the result the CAV or CLV of control is applied to control the spin of the disk during recording data the on the writ-once medium.

WO 2006/035948 A1

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.